



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Marcel Meier et al.

Application No.: 10/725,029

Filed: December 2, 2003

For: EXHAUST-GAS-TURBINE CASING

) **MAIL STOP AMENDMENT**

) Group Art Unit: 3745

) Examiner: DEVIN J. HANAN

) Confirmation No.: 4702

REQUEST FOR RECONSIDERATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated May 17, 2007, reconsideration and allowance of the present application are respectfully requested.

A personal interview was conducted between Examiner Hanan, Primary Examiner Nguyen, and Richard J. Kim, on August 9, 2007. The substance of the interview included a discussion of claims 4, 8 and 17, as summarized below.

Claims 4, 6, 8-11, 14, 15 and 17-20 remain pending, with claims 4, 6, 8, 10, 11, 14, 15, 17 and 19 being independent. On page 4 of the Office Action, claims 6, 10, 11, 14, 15, 19 and 20 are indicated as being allowed.

On page 2 of the Office Action, independent claims 4, 8 and 17, along with dependent claims 9 and 18, are rejected as being anticipated by U.S. Patent 5,403,150 (McEachern, Jr. et al.). This rejection is respectfully traversed.

As discussed during the interview, Figure 1 shows an exemplary embodiment of an exhaust-gas turbine having a turbine casing 1. The turbine casing has a radially outer, spiral gas-inlet casing and a casing wall 12 on the gas outlet side. A

bearing housing 4 has a shaft 3 that is rotatably mounted using bearings 31. A turbine wheel 5 is arranged on the shaft 3 and has moving blades 51. An inflow passage is defined on one side by the casing wall 12 on the gas outlet side, whereas a disk-shaped intermediate wall 2 serving as heat protection is arranged on the other side.

As further discussed during the interview, an exemplary embodiment has a heat-protection wall 2 as shown in Fig. 2. A seating 21 designed as an encircling edge is arranged on the heat-protection wall 2 in the radially inner region and rests on a seating 41, likewise designed as an encircling edge, of the bearing housing.

As Applicants' representative argued during the interview, due to the radially inner seating 21 of the heat-protection wall 2, which bears against the seating 41 of the bearing housing, accurate centering of the heat-protection wall 2 can be ensured, and accurate centering of the turbine casing 1 can also be ensured.

Claims 4 and 18

During the interview, Applicants' representative discussed a heat-protection wall defining with the turbine casing an inflow passage leading to the turbine wheel. The heat-protection wall has at least two seatings for centering the turbine casing relative to the shaft, a first seating of the at least two seatings being provided for resting on the bearing housing, and a second seating of the at least two seatings being provided for resting on the turbine casing. At least one of the first or second seatings is designed as an encircling edge which is provided for resting on the bearing housing and/or the turbine casing. The first and second seatings are designed to be directed radially outwards.

The foregoing features are broadly encompassed by claim 4, which recites, a heat-protection wall for an exhaust-gas turbine having, among other features, a first seating of the at least two seatings being provided for resting on the bearing housing, and a second seating of the at least two seatings being provided for resting on the turbine casing; wherein at least one of the first or second seatings is designed as an encircling edge which is provided for resting on the bearing housing and/or the turbine casing; wherein the first and second seatings are designed to be directed radially outwards.

US 5,403,150 (McEachern, Jr.) discloses a turbine of a turbocharger with a heatshield (60). During the interview, Applicant's representative argued that the McEachern, Jr. patent does not disclose the heat-shield being used or being able to be used as centering device for centering the turbine-casing (19) relatively to the shaft of turbine wheel (18). Further, the heat-shield disclosed in the McEachern, Jr. patent, as shown in Fig. 2) does not comprise radially outwardly directed seats. As illustrated in Fig. 1 of the McEachern, Jr. patent, legs (63) of the heat-shield (63) are not of annular ring shape, where the threaded apertures are missing in the lower part of the drawing.

At least for the foregoing reasons, the McEachern, Jr. patent would not have taught or suggested a heat-protection wall for an exhaust-gas turbine having, among other features, a first seating of the at least two seatings being provided for resting on the bearing housing, and a second seating of the at least two seatings being provided for resting on the turbine casing; wherein at least one of the first or second seatings is designed as an encircling edge which is provided for resting on the

bearing housing and/or the turbine casing; wherein the first and second seatings are designed to be directed radially outwards, as recited in claim 4.

Claim 4, which is directed to the heat-protection wall as such, should therefore be allowed. Claim 18 depends from claim 4, and should also be allowed.

Claims 8 and 9

Claim 8 recites a bearing housing for an exhaust-gas turbine featuring, among other features, the bearing housing, for centering the turbine casing via the heat-protection wall and relative to the shaft mounted in the bearing housing, comprises at least one seating for resting on the heat-protection wall, said seating being directed radially inwards.

During the interview, Applicant's representative argued that the McEachern Jr. document would not have taught or suggested a seating being directed radially inwards. Rather, the McEachern, Jr. patent discloses a backplate 40, which is not a seating facing radially inwards, and does not have any seating function. The McEachern, Jr. patent appears to merely disclose a part of a casing wall with no particular seating function.

At least for the foregoing reasons, the McEachern, Jr. patent would not have taught or suggested a bearing housing for an exhaust-gas turbine featuring, among other features, the bearing housing, for centering the turbine casing via the heat-protection wall and relative to the shaft mounted in the bearing housing, comprises at least one seating for resting on the heat-protection wall, said seating being directed radially inwards, as recited in claim 8.

Claim 8, which is directed to a bearing housing for an exhaust-gas turbine as such, should therefore be allowed. Claim 9 depends from claim 8, and should also be allowed.

Claim 17

Claim 17 recites an exhaust-gas turbine having a turbine casing featuring, among other features, means for centering the turbine casing relative to a shaft mounted in a bearing housing; wherein a heat-protection wall contains a material which has a higher coefficient of thermal expansion than the material of the turbine casing.

During the interview, Applicant's representative argued that the McEachern, Jr. patent does not disclose that the heat-shield has any kind of centering function. Rather, the McEachern, Jr. patent appears to disclose the heat-shield (63) as solely being used for shielding the heat and to hold the insulation layer 50 in place. At least for the foregoing reasons, the McEachern, Jr. patent would not have taught or suggested an exhaust-gas turbine having a turbine casing featuring, among other features, means for centering the turbine casing relative to a shaft mounted in a bearing housing; wherein a heat-protection wall contains a material which has a higher coefficient of thermal expansion than the material of the turbine casing, as recited in claim 17.

As such, Applicant's independent claims 4, 8 and 17 are allowable. The remaining rejected claims 9 and 18 depend from the respective independent claim and recite additional advantageous features which further distinguish over the document relied upon by the Examiner. As such, the present application is in condition for allowance.

All objections and rejections raised in the Office Action having been addressed, it is respectfully submitted that the application is in condition for allowance and a Notice of Allowance is respectfully solicited.

Respectfully submitted,

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Date: August 15, 2007

By: _____

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